

Appl. No. 09/786,357
Amendment dated: October 31, 2003
Reply to OA of: August 1, 2003

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

17(previously presented). An electronic component lead inspection device, the device comprising:

a pickup header for picking up an electronic component package to move same;

a reflecting plate attached to the pickup header;

a first light source for illuminating a light to the reflecting plate;

a second light source for illuminating a light to the electronic components package;

acquiring means for acquiring an image of the electronic component package underneath a traveling passage of the electronic component package;

control means for controlling the first light source to illuminate a light if the electronic component package is a gull wing type electronic component package and for controlling the second light source to illuminate a light if the electronic components package is a ball grid array type electronic component package and for outputting an image signal of the electronic component package acquired by the acquiring means; and

inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.

18(currently amended). An electronic component lead inspection device, the device comprising:

(A) a light source for illuminating a light to an electronic component package;

(B) acquiring means for acquiring an image of the electronic component package, the acquiring means comprises:

(a) image transfer means for transmitting images of bottom view and side view of the electronic component package, the image transfer means comprises:

a first image transfer means for transmitting an image of bottom view of the electronic component package, and

second and third image transfer means for combining images of mutually facing side views of the electronic component package to thereafter transfer same, and

(b) one or more cameras for acquiring the images of bottom ~~[[vie]]~~ view and side views of the electronic component package transferred through the image transfer means;

(C) control means for outputting an image signal of the electronic component package acquired by the acquiring means; and

(D) inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.

19(previously presented). The electronic component lead inspection device as defined in claim 18, wherein the first image transfer means comprises one or more reflecting mirrors for reflecting the image of bottom view of the electronic component package to thereafter transfer same to the camera.

20(previously presented). The electronic lead inspection device as defined in claim 18, wherein the second and third image transfer means comprise:

two or more reflecting mirrors for respectively reflecting images of mutually facing side views of the electronic component package; and

one or more right angle prisms for combining images respectively reflected by the reflecting mirrors to the one camera.

21(previously presented). The electronic component lead inspection device as defined in claim 18, wherein the acquiring means comprises:

a first camera for acquiring the image of bottom view of the electronic component package transmitted from the first image transfer means; and

second and third cameras for acquiring respective the images of side views of the electronic component package combined and transmitted thereafter by the second and third image transfer means.

22(previously presented). The electronic component lead inspection device as defined in claim 18, wherein the acquiring means further comprises a height adjusting means for adjusting heights of the camera.

23(previously presented). The electronic component lead inspection device as defined in claim 22, wherein the height adjusting means comprises:

a guide rail formed at one side of a housing;

a guide plate integrally formed at the camera to upwardly and downwardly move the camera along the guide rail; and

fixing means for fixing the guide plate to the guide rail to thereby fix a position of the camera.

24(previously presented). An electronic component lead inspection device, the device comprising:

(A) a light source for illuminating a light to an electronic component package;

(B) acquiring means for acquiring an image of the electronic component package, the acquiring means comprises:

(a) image transfer means disposed on an upper of a housing to transfer images of bottom and side views of the electronic component package, and

(b) first, second and third cameras provided underneath the housing to respectively acquire bottom and side views of the electronic component package transmitted via the image transfer means, the image transfer means comprises:

a pair of reflecting mirrors centrally arranged at a housing for twice reflecting at right angle a bottom view of the electronic component package to thereafter transfer same to the first camera,

four reflecting mirrors respectively disposed at four side views of the housing to reflect four side views of the electronic component package lengthwise of the housing,

four right angle prisms mounted at four side views of the housing to respectively face the four reflecting mirrors to reflect at right angle the images of four side views reflected from the four reflecting mirrors relative to lengthwise direction of the housing, and

two right angle prisms respectively disposed between two facing right angle prisms out of the four right angle prisms to combine images of two side views of the two facing electronic component package and to respectively transfer same to the second and third cameras;

(C) control means for outputting an image signal of the electronic component package acquired by the acquiring means; and

(D) inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.

25(previously presented). An electronic component lead inspection device, the device comprising:

(A) a light course for illuminating a light to an electronic component package;

(B) acquiring means for acquiring an image of the electronic component package, the acquiring means comprises:

Appl. No. 09/786,357
Amendment dated: October 31, 2003
Reply to OA of: August 1, 2003

(a) image transfer means for combining images of mutually facing side views of the electronic component package to thereafter transfer same to a camera, and

(b) one or more cameras for acquiring the images of side views of the electronic component package transferred through the image transfer means;

(C) control means for outputting an image signal of the electronic component package acquired by the acquiring means; and

(D) inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.

Claims 26-27(canceled).